



# 2013 Stream Survey Report

## Spaulding Creek Rotation (WBIC 284900)

### Waupaca County

Prepared by Al Niebur and Top Moon Lee

### Introduction and Objectives

Spaulding Creek is a Class I trout stream consisting of 9.12 miles of trout water located in the Little Wolf River watershed, Waupaca County. It is one of the primary tributaries in the Little Wolf River Fishery Area. Trout populations are supported entirely by natural reproduction with no stocking. Fishing access is very good with multiple DNR managed easements. Objectives of the rotation surveys are to determine species composition, relative abundance, and size structure for trout and other gamefish.

Regulations: Entire Stream - Category 2

Size Limit: All Trout - 7 inches

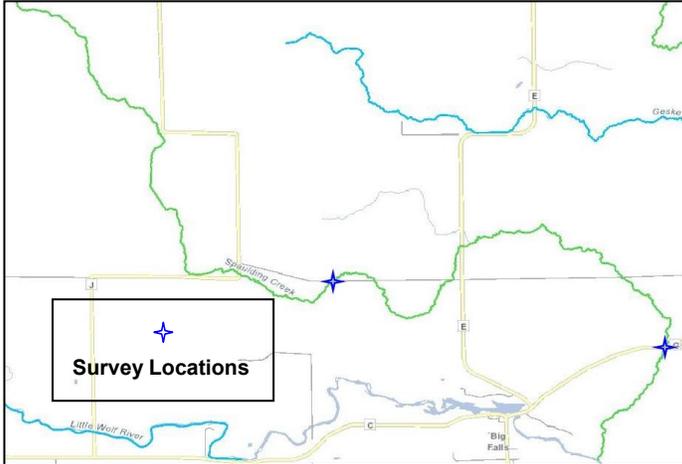
Daily Bag Limit: 5 (in total)

### WISCONSIN DNR CONTACT INFO.

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### Survey Method

All streams are sampled according to WDNR wadeable streams monitoring protocols. The Spaulding Creek is on a 6 year rotation schedule with 1 segment and 2 sites identified for assessment. All sampling sites are electrofished with either a towed barge or backpack shocker. Sampling distance is at least 35 times the mean stream width or a minimum of 100 meters. All gamefish are identified to species, measured for length, and examined for fin-clips. All fish species are collected and counted for calculation of an Index of Biotic Integrity (IBI) in at least one site per stream segment.



### Survey Information

Station	Survey Date	Station Length	MSW	GPS (Start/Finish)	Gear	Dippers	IBI
CTH G	07/11/2013	330 ft	8.9 ft	44.62552, -88.99500 44.62650, -88.99545	Towed Barge Shocker	3	YES
Spaulding Rd West	07/11/2013	354 ft	10.1 ft	44.63364, -89.03924 44.63304, -89.04026	Towed Barge Shocker	3	NO

### Results and Discussion

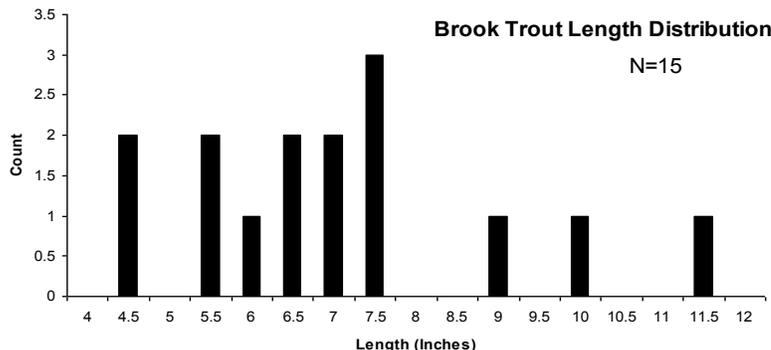
- Brook trout population abundance was at low to moderate levels. Of concern was the absence of young of year (YOY) at both sites.
- The fish assemblage sampled in the lower Spaulding Creek indicated fair overall environmental quality. The presence of several thermally tolerant species all contributed to a low IBI score which may indicate this section of stream is prone to warmer water temperatures.
- This particular site has had a history of past habitat development work consisting of overhead bank covers and streambank brushing. It appears most of the overhead bank covers are no longer functioning due to settling. Since stream temperatures are of concern in this area it is recommended that future habitat work be limited to brush bundles and large wood placements. Tree plantings to improve canopy and shading may also be beneficial.
- Several DNR easements are located on the Spaulding Creek and should be reconnoitered for potential habitat development. Future work should be focused on upstream reaches.

### Metric Descriptions

- Catch per effort (CPE) is an indirect method of measuring fish population relative abundance. For all trout surveys we typically quantify CPE by the number and size of trout captured per mile of stream. CPE indexes are compared to statewide streams by percentile (PCTL). For example, if a CPE is in the 90th percentile, it is higher than 90% of the other CPEs in the state. CPE percentiles can also be used to categorize trout abundance by 33rd (low density), 66th (moderate), 90th (high), and 95th (very high) benchmarks.
- The Index of Biotic Integrity (IBI) is a rating of environmental quality based on fish assemblage. Scores of 90-100 would indicate excellent quality while scores less than 30 would indicate poor quality. Our analysis utilizes the IBI for Wisconsin coldwater streams (maximum daily mean water temperature usually <22°C).

### Catch per Effort

Station	Species	Range and (Average Length)	Total (PCTL)	YOY	>5" (PCTL)	>8" (PCTL)	>10"	>12" (PCTL)
CTH G	Brook	6.8-7.6 (7.3)	48 (25th)	0	48 (35th)	0	0	0
Spaulding Rd West	Brook	4.8-11.7 (7.3)	179 (45th)	0	149 (60th)	45 (70th)	30	0



### Species Community and IBI

Species Sampled	Total	IBI Score	Integrity Rating
Brook Trout	3	<b>40</b>	<b>FAIR</b>
Central Mudminnow	17		
Common Shiner	4		
Creek Chub	32		
Mottled Sculpin	8		
Pearl Dace	19		
Redbelly Dace	7		
Western Blacknose Dace	11		
White Sucker	10		